CLAIMS

1. A manufacturing method of a semiconductor device comprising:

forming a plurality of circuit portions each having a modulation circuit, a demodulation circuit, and a logic circuit over an insulating substrate by a first exposure means; and

forming a plurality of different memory circuits over the substrate by a second exposure means.

2. A manufacturing method of a semiconductor device comprising:

forming an object to be processed over an insulating substrate;

applying a photoresist on the object;

exposing the photoresist by a first exposure means;

exposing the photoresist by a second exposure means;

developing the photoresist exposed by the first exposure means and the second exposure means; and

etching the object by using the developed photoresist to form a plurality of first patterns of circuit portions each having a modulation circuit, a demodulation circuit, and a logic circuit and a plurality of second patterns of different memory circuits.

3. A manufacturing method of a semiconductor device comprising:

forming an object to be processed over an insulating substrate;

applying a first photoresist on the object;

exposing the first photoresist by a first exposure means;

developing the exposed first photoresist;

etching the object by using the developed first photoresist to form a plurality of first patterns of circuit portions each having a modulation circuit, a demodulation circuit, and a logic circuit;

applying a second photoresist on the object;

exposing the second photoresist by a second exposure means;

developing the exposed second photoresist; and

etching the object by using the developed second photoresist to form a plurality of second patterns of different memory circuits.

4. A manufacturing method of a semiconductor device comprising:

forming an object to be processed over an insulating substrate;

applying a photoresist on the object;

exposing the photoresist by a first exposure means;

exposing the photoresist by a second exposure means;

developing the photoresist exposed by the first exposure means and the second exposure means; and

etching the object by using the developed photoresist to form a plurality of first patterns of first circuit portions and a plurality of second patterns of different second circuit portions,

wherein the second exposure means can change the contents of exposure depending on program.

5. A manufacturing method of a semiconductor device comprising:

forming an object to be processed over an insulating substrate;

applying a photoresist on the object;

exposing the photoresist by a first exposure means;

exposing the photoresist by a second exposure means;

developing the photoresist exposed by the first exposure means and the second exposure means; and

etching the object by using the developed photoresist to form a plurality of first patterns of first circuit portions and a plurality of second patterns of different second circuit portions,

wherein different data is stored in each of the second circuit portions.

6. The manufacturing method of a semiconductor device according to any one of claims 1 to 3, wherein the memory circuit is a mask ROM.

7. The manufacturing method of a semiconductor device according to claim 4 or 5, wherein the second circuit portion is a mask ROM.

8. The manufacturing method of a semiconductor device according to any one of claims 1 to 3, wherein the difference among the plurality of memory circuits is data stored therein.

9. The manufacturing method of a semiconductor device according to claim 4, wherein the difference among the plurality of second circuit portions is data stored therein.

10. The manufacturing method of a semiconductor device according to any one of claims 1 to 3 and 5, wherein the second exposure means can change the contents of exposure depending on program.

11. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein the first exposure means is an exposure means using a mirror projection exposure system.

12. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein the first exposure means is an exposure means using a step and repeat exposure system.

13. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein the first exposure means is an exposure means using a step and scan exposure system.

14. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein the second exposure means is an exposure means using an electron beam exposure system.

15. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein the second exposure means is an exposure means using a laser exposure system.

16. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein a portion exposed by the second exposure means is a contact hole.

17. The manufacturing method of a semiconductor device according to any one of claims 1 to 5, wherein the insulating substrate is one selected from the group consisting of a glass substrate, a plastic substrate, and a film insulator.

18. An IC card, an IC tag, an RFID, a transponder, a bill, a security, a passport, an electronic apparatus, a bag, and a garment each comprising a semiconductor device manufactured by the manufacturing method according to any one of claims 1 to 5.

19. The manufacturing method of a semiconductor device according to claim 4 or 5, wherein each of the first circuit portions comprises a modulation circuit, a demodulation circuit, and a logic circuit.

20. The manufacturing method of a semiconductor device according to claim 4 or 5, wherein each of the second circuit portions comprises different memory circuits.